

# THE ZOOLOGIST

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## BIRDS AND THE GREAT SNOW.

BY ARTHUR H. PATTERSON.

THE great snowstorm which characterized the close of 1906 and the early days of 1907, and its effects on bird-life, will long remain fresh in my memory. I am amused sometimes by the prognostications of those who prophesy hard winters because of an abundance of hawthorn-berries, and Gulls flying inland, and the like; it seems to me natural that hawthorns, like apple-trees, should, after a year's rest and unfruitfulness, bear well the following season, and that the birds should make short journeys for a change of food, or to avoid a breeze that might prove inconvenient. From many years' observations in the open, at the best I can foresee but a few days' *probabilities* ahead; but from some—let me call it *intuitive*—*instinct* I am led occasionally to look for a sharp winter. I cannot explain this, nor have I tried to; and by reference to my note-books I find that hard winters do not trouble us much oftener than once in nine years on the average. And I have many times observed that unless we get heavy snows before the second or third week in December, we do not often get any real winter to worry over, and wildfowlers may expect a poor shooting season, here, for the remainder of the time. I made a few observations during the stress of the severe weather, and will give them as I have dated them.

December 31st, 1906.—After a long spell of "open" winters, something akin to the "old fashioned 'uns" obtained during the

last week of this year. On the 22nd it rained heavily well into the night, and next day snow began to fall. Birds began to show signs of restlessness, and the Black-headed Gulls had been for two or three days feeding in the river, flying around the bridge, in the heart of the town—a fairly good sign of a change “of some sort” coming. The morning of the 23rd dawned with a fiery glow in the west, and shortly the red sky cooled into grey, and from out the deepening gloom snow began to fall fast and persistently, and in right good earnest. My first thoughts went out for “the poor birds!”—the birds that would die by want of food and the hail of shot.

On the 22nd and 23rd flocks of various wildfowl were observed trooping along the foreshore southwards, one bunch—presumably of Duck and Mallard—numbering quite five hundred; and a newspaper paragraph from Aldeburgh reported that “huge flocks of Ducks, Wild Geese, Wigeon, and other fowl are continually passing south to seaboard, indicating a continuance of the present severe weather.”

Such sights and reports naturally set every owner, or friend's owner, of a shoulder- or punt-gun to work furbishing up his weapon, and laying in stores of ammunition; local ironmongers were loading cartridges by night and by day; and Wild Ducks began to fall to the guns of several frequenters of Breydon. Every amateur puntsman got afloat, and had I been an Excise officer I could have made a name by sorting over the regiment of those who, with every variety of gun imaginable—with, and mostly without, gun-licences—skulked around Breydon walls and the marshes.

On the 27th I went for a stroll to Gorleston pier-head, having heard that in their distress some Wild Ducks, “of a sort unknown,” were to be seen inside the harbour, but I saw none. A few score small Gulls were to be seen floating on the ebb-tide by the North Sand just off the pier, all the larger Gulls having gone—somewhere, and few indeed were seen while the severity of the weather lasted. But I noticed a few Thrushes (stray Redwings and the like), Finches, and a Pipit or two cross over the pier, almost within arm's length, in that steady purposeful manner peculiar to them during the normal period of immigration. On the 28th I went for a walk round, crossing the North Denes,



sometimes wading through deep snow-drifts, with many a slip and stumble—for the undulations and sudden breaks of the sand-dunes were hardly traceable—and I finally reached the shore. A few out-flying *Turdidæ* and Finches passed over me as I floundered through the snow, but, when I reached the beach, I found Thrushes, Fieldfares, Redwings (in particular), Larks, Linnets, Pipits, Twites—and, indeed, *insessores* of all kinds, even including Goldfinches—flying due south, following the coast-line. Silently, like brown ghosts of birds, they flew—hour after hour—thousands upon thousands! I wondered whence they were trooping, and whether but for stress they would have still set at defiance the promptings that impelled many of their relatives two months ago on their migration southward. Surely these were they who had landed in Scotland, and would have stayed there! Bunches of five, ten, twenty, fifty straggled and struggled along—odd birds, fagged right out—alighting now and then to rest awhile. They passed almost within arm's length, many of them, and their line of flight lay between the sea-licked edge of the snowy plain and low-water mark, over a clear ribbon of sand some fifteen yards in width. The silent hosts opened on either side of me, as might a regiment of infantry, as I walked north; they did the same as I came back homeward, slightly closing their formation as they proceeded ahead of me. Unfortunately the morning was gloomy, and my trusty Zeiss glasses a little too powerful for their nearness; so that the smaller hosts, had they contained rarities, would have passed on unidentified. I longed to have my smaller "operas," but no gun, for I abominate that spirit which leads to the slaughter of hosts of little migrants for the sake of (reputedly) adding a new species to a county's fauna. I would rather spend half my life among the mud-flats, and not know that some rare and new species of wader was watching *me* daily, than know and name it, if it meant my taking away the life it is as much entitled to as I am to mine! Here the ichthyologist, however sentimental, scores, for all rare and most common fishes are *more or less caught by accident*! He may sit all day long for years angling from a rock, seeking in vain a *Balistes capriscus*, and to-morrow it may be cast up on the shore by the scornful sea!

The poor Black-headed Gulls fared badly enough; they left

Breydon *en masse*, and betook themselves to the lower reaches of the rivers. I surprised thirty or more of them by running unexpectedly—to them—up a river-bank, putting them to flight for a short time from ink-black sewage-water running from a sewer outlet. These birds swarmed the outlying gardens, and alighted on the public roads; persons fed them from the bridges, the kindly disposed fed them with table-scraps on their very door-steps in various parts of the town, and more than one brute made target-practice with them. One hapless bird would not make way for a cyclist, and was accidentally killed by his machine.

Two or three times I visited Breydon walls during the continuance of the snow and frost, but, having a fair knowledge of my own "fragility," I wisely, I think, kept off Breydon itself. Coots in miserable flocks slouched about on the mud-flats, demoralized by incessant slaughter among their ranks. Parcels of wildfowl flew affrightedly to and fro, for every man's gun was turned against them. "Strike" Sharman, a veteran Breydoner, remembering bygone winters, was tempted again to visit the mud-flats, and came home with the fore-deck of his punt covered with Mallard and Pochards. I visited his boat-shed on the 30th, and saw a row of Pochards and Scaups lying on a bench. "That poor Crested Grebe," said he, "I picked up exhausted out of a hole in the ice. The tide had fallen; it couldn't dive away, and it couldn't get on the wing."

The poor old Eel-pickers, and other water-side "spaniels," frozen out from drains and channels, hung dejectedly around the quay-sides, or crowded into their North Quay shelter, bewailing the hard times, and indulging in reminiscences of similar days in the long ago.

On the 29th I had a look round the Saturday's market. On Edmond's (late Durrant's) game-stall I saw a number of Mallard and Pochards, the latter still in the plumpest condition, and a few Common Snipe hung there too; they were fat enough, although not tempting eager purchasers, but scores (and hundreds later on) were turned away as thin and useless. On the countryfolk's stalls were numerous Tufted Ducks, Pochards, and others; they had been having a fine time on some of the Broads—Hickling in particular—before the fowl were frozen out. Only



one Jack-Snipe was noticed in the market, but numerous bunches of Fieldfares, Thrushes, Blackbirds, and other small birds were on sale, and these found ready customers, which wildfowl did not.

"So you've been killing your friends—the slug-eaters!" I said to a couple of different stall-keepers, touching the dead *Blackbirds* with my finger.

"Yow'd think them friends, 'bor," said one, "if yow saw 'em in the summer!"

"Yow'd think so," said the other, "if yow was jist to see 'em among our fruit!"

But neither could tell me where they got their fruit from in winter; but so vindictiveness had slain them, and petulance was exhibited even in referring to them. And as Blackbirds are esteemed uncommonly good eating in Yarmouth, no mercy is ever shown them.

On the 30th I dropped upon "Jigger" Halls, an intelligent young engineer, whose works throw their shadow into Breydon, and who is ever ready to show visitors this magnificent estuary in his motor-launch, and who also follows Breydon with a big gun, "when there's anything about." He was just sitting down to his Sunday dinner, after a week's wild life on Breydon, sleeping at night in his snug, roomy houseboat, returning home only at intervals with his game, which had a fairly ready private sale.

"I closed down [the engineering shed] for the Christmas week," said he, "and have had a week on Breydon—and haven't done so bad." Let me summarise his experiences.

He met with the first lot of fowl on the 23rd, getting several Mallard and seventeen Coots. On the 24th he killed twenty-five Coots at one shot with the big gun, and obtained altogether "two or three linen-baskets" of these birds. There must have been quite three thousand Coots on Breydon (frozen out from the Broads); they kept much in line, like soldiers in a regiment (as I have seen them here before in hard winters), and fed ravenously on the sweet, fattening stems of the *Zostera marina*. They make quite an audible scrunching noise in tearing it up. A wretched adult Crested Grebe sat miserably bunched up on the ice, literally starving; he knocked it over with an oar as he rowed along.

About sixty Swans visited Breydon. Sharman killed three; Halls killed one, which he believed to be a Polish Swan, and gave me a fairly representative description of it. It was quickly sold for eating. The majority of the Swans appeared to be Whoopers. Geese had been scarce; five Brents were seen, and a Grey Lag Goose been killed. Halls's game-list for the week was as follows:—1 Swan, 34 Mallard and Duck, 6 Pochards ("Pokers"), 5 Wigeon, 1 Teal (only one seen), 1 Golden Plover, 1 Crested Grebe, 60 Coots.

A few Golden Plovers hung about during the week, but were unusually shy. "Hard-fowl"—*i. e.* Golden-eyes, Tufted Ducks, and Scaups—were seen in small bunches, but they too were shy and wary. Never so many Pochards have been killed or seen for many years.

The few larger Gulls remaining here have been seen chasing unwounded Dunlins whenever they flew near them, but these quick-turning little birds were too swift for them; escaped cripples fared worse. The Hooded Crows forsook the Breydon flats and the marshes, and kept to the open reaches of the rivers, and to the shore. I saw a dead Gull clean picked by them—as much of it as was not frozen into the ice on a ditch. One hungry fellow was observed making strange efforts to get some viand down his gullet, but his heart failed him; prompted by curiosity, the rejected morsel was examined, and found to be a tablet of highly scented soap, much holed by his hard bill in trying to find, if possible, a sweeter kernel! Kingfishers have been observed miserably sitting about on posts and rails, looking abject in their hunger; and even those who usually have no pity were sorry for them. One came and tapped on the window of Halls's houseboat. While out shooting on one occasion he left the door of the houseboat open, and a Wagtail that had been hanging around for scraps went in and cleared the fragments off his dinner-plate.

And when killing a wounded Mallard by cutting its throat, so as not to damage its neck, as wringing will sometimes do, the blood dripped and congealed on the snow on the fore peak of the punt. While in the houseboat a hungry Starling flew down on the boat and ravenously ate the crimsoned snow, and when driven away returned again, and ate more of it.

Halls said the 23rd was a "wildfowl day beyond all memory." Some small return bunches visited Breydon on the 28th and 29th. The ice formed so rapidly on the night of the 29th that he had to return from the drain to his houseboat, having no ice-hook to cut a way through, but on the 30th he managed to hack his way out to open water.

Mr. J. H. Gurney wrote me on Dec. 26th, and remarked on "flocks of Sky-Larks going seawards." He saw twenty Rooks that day eating a dead sheep. They devour putrid dogs on Breydon, and seem to think nothing of it—indeed, they rather like it! The Rooks around Yarmouth kept much to the various outlying gardens, and, when not propping for a morsel, sat disconsolately on the topmost twigs of small trees, surveying the miserable outlook, and thinking of happier days. They hunted singly—every bird for himself. Chaffinches fared badly, and looked the most abject of all the Finches; on the 27th, as I stood near a rail on Breydon walls, one came to within ten inches of my foot to search a tiny patch of bare soil. The Meadow-Pipits seemed fairly happy, and hunted most of the time on the weedy edges of Breydon, and along by the river margins. Scamps of boys were to be seen catching here and there a miserable bird with a piece of herring-lint.

Many wildfowl were observed on the rivers, and at St. Olaves some good bags were made. One gunner shot a Goosander, and three equally harmless Dabchicks were killed—for no useful purpose. In the neighbouring villages all the berries had been stripped from the hedgerows. Two Snipe wandered into a cattle-shed on the marshes, where among the stable-refuse they probed and prodded, in hopes of finding some stray grub or worm; their footprints in the snow led to their discovery, and, on a person cautiously slipping in, they promptly and safely dashed out.

Wild Ducks were plentiful enough at Fritton Lake, and big bags were made at the decoys; as many as seven hundred birds, I am told, were netted therein in one day. Truly a neck- and an arm-aching record! To certain brackish ditches round the west end of Caister, on the edge of the marsh-lands, Ducks persistently resorted, which resulted in one individual, who has, since the conclusion of the Herring voyage, just before Christmas, done

nothing but shoot in that particular neighbourhood, obtaining unusually good sport. On one occasion he secured a Mallard in a most unexpected manner; hearing an unusual clamour among some tame Ducks kept hard by, he went out to see the reason of it. To his astonishment he at length discovered a Mallard sitting on the ridge-tiles of an adjoining house. It was but the matter of a few moments to slip back for his gun, and on his prompt return he shot at and killed that venturesome fowl.

When skinning a couple of Coots, after they had been feeding for about a fortnight on the *Zostera*, I found them exceedingly plump and fat; their stomachs and intestines were packed with doubled-up "grass"-blades in various stages of digestion. The fresher grass still hung from their bills. I found a couple of small winkles in one of them.

*January 5th, 1907.*—Yesterday a fine female Goosander was brought to me for identification; it was shot at Buckenham, where fowl during the past two or three days have been abundant. A few Goosanders and Smews—"Sawbills"—that only visit us in any numbers in very severe weather, appear to have kept off Breydon, although some Smews visited the upper parts of it, and frequented the rivers.

I went this afternoon to Belton and St. Olaves, and had a chat with one or two of my friends who like to watch birds, preferably down the barrel of a gun. In the washhouse of one hung some Coots and Ducks, and a bunch of Snipe—four Common and two Jacks. A young urchin, who had just left school to work in a cowshed, passed his noon hours during the bad weather near a ditch frequented by Snipe. He obtained three or four small spring-traps, and placed them in the water near where he saw footprints; these Snipe were the proceeds of a few hours' work. The boy's father—a Mr. Brooks—assured me that *thousands* of Snipe came to the marshes just before the snowstorm, and they had haunted also the ronds and saltings. They were so put out by its continuance that seven were seen with Dunlins on the mud-flats.

Brooks assured me he might have shot a pair of Smews on the river at Burgh, but, being eager to secure a Mallard swimming close by, in the end missed them all. Several Dabchicks frequented the river there. Geese in flocks of seventeen, twelve,



thirteen, and ten respectively, mostly "a darkish grey sort" (probably Bean-Geese, the most common species here this winter), passed over; and a large hawk, which I have reason to believe was a Buzzard, flew out of a stackyard with straws depending from its feet, and I have no doubt a rat was mixed in amongst them. A large "cloud" of Wood-Pigeons, containing some hundreds, passed over from the direction of Yarmouth, where another acquaintance of mine saw them a little earlier on the same date—no doubt the same flock.

To-day I saw three birds feeding near Breydon, which I at first believed to be the Meadow-Pipit. On putting them to flight, which they appeared very reluctant to take, I noticed an uncommon amount of white on the two outside feathers on either side the tail. It struck me at the time as being rather unusual, but, not being prepared to suspect anything rare, I paid no more heed to them, and let them be.

On taking up 'The Zoologist' of December last, I happened to read an article on the Water-Pipit,\* and on further reference to Saunders's 'Manual,' I was astonished to find how curiously my birds corresponded with the descriptions there given of the species. I have been back to the spot since then, but, as I was prepared to be, was disappointed at not again meeting with these birds. On cautiously introducing the matter and my suspicions to an old and observant gunner, he, strangely enough, spoke of seeing *three* birds a few hours previously at the harbour-mouth near the piles of the breakwater, which he noticed "carried more 'an usual" white on their tails. There the matter for the present must end, for, were I to describe the species to any of those who prowl around with guns searching for "specimens," not a Meadow-Pipit would escape the general massacre "rarities" provoke. A "new" species had better remain unidentified; but there—

"P. W. D. J.," writing in the 'Daily Express' of Jan. 5th, 1907, commenting on the appearance of Wild Swans at Yarmouth, remarked:—"I am informed there were fifty of the birds, but whether they were Whoopers or the smaller Bewick's word has not reached me. Both species have been seen in the neighbourhood in fairly large flocks during hard winters, where

\* By Michael J. Nicoll, F.Z.S.

they have been driven south by severe weather in their far northern haunts. Doubtless Mr. Patterson . . . knows all about these latest visitors."

As a matter of fact, I was extremely unfortunate with regard to seeing any of these Swans, alive or dead, and felt called upon to reply to the article in question; and, as my letter was given in almost its entirety, take the liberty of re-writing it as given by the editor:—

"Mr. Arthur H. Patterson . . . . sends to the 'Express' an interesting account of an attempt to identify a Polish Swan after the bird had been placed in the boiling-pot. Mr. Patterson first of all refers to the flock of Wild Swans which were mentioned in the 'Express' as having visited Breydon Water, near Yarmouth.

'On very reliable authority,' Mr. Patterson says, 'I understood that about sixty Swans were seen on that delightful old backwater. Unfortunately I just missed seeing them, and I was equally unfortunate in not seeing the four that were shot—three by one of my acquaintances, and one by another punter. I have seen as many as fifty at one time, and I can assure you they were a sight worth seeing. The odd bird shot, from a description given me, I took to be a Polish Swan, and it was sold to a carnivorous publican for forty-two pence. I saw him just too late, for on visiting his bar he assured me that the "missus" had plucked it. Let me see but a foot, I begged; on which he called the "missus," who presently came forward. "Let Mr. Patterson see the head and the feet of that Swan," he said. She apologised, and said that both were in the saucepan, which she ran indoors and fetched, hauling out a foot on a huge fork; but I found boiled Swan's foot was an awkward thing to swear the bird's identity by, and would have defied Prof. Owen himself.'"

*January 12th, 1907.*—The weather and bird-life generally have returned to the normal. To-day's market was comparatively birdless. Only on one stall was there evidence of anything unusual having occurred for a day or two. A haberdasher named Youngs (the hero of the Whistling Ducks)\* had suspended, amid stockings and underclothing, a large display of Coots tied in

\* Cf. Zool. 1906, pp. 394-5.

couples, which he was selling—and freely, too—at sixpence a brace. I found they were exceedingly plump and in good condition; these birds appear loth to leave the *Zostera*, and to go back to the Broads. This is the way with them when they have once tasted this succulent vegetable. Youngs, the day before, had shot a Shag, an unusual winter visitor here.

The Gulls have now betaken themselves to their usual haunts, a few only frequenting the river in the neighbourhood of the town, and these the Black-heads. During the continuance of bad weather these birds made themselves extremely conspicuous in the heart of the town. An old lady carried a parcel of hare's bones, broken pudding, and vegetables to the St. George's Park, where they assembled in numbers. There was a great deal of squabbling over these coveted fragments, and Woods, the park-keeper, after they had devoured the softer morsels, smashed up the bones. In a very short time these were cleared away also.

As usual, the greatest sufferers were the Redwings, a fact remarked on by observers who, like myself, came to the conclusion that extreme cold, as much as shortness of food, seriously affects this species; and it was noticeable, too, how in an unusually short time they drooped and died, while in other years, in more protracted frosts, without so much snow, they did not so soon succumb. Numbers were found dead at Filby, at Belton, and other villages. Some Chaffinches were also found dead, but Larks, as they usually do, took to the cabbage-gardens, and fed freely on the cabbages, to the undoing of the gardeners, and in many instances to their own.

## ORNITHOLOGICAL OBSERVATIONS IN SURREY: 1906.

By L. B. MOURITZ.

THE most interesting event in Surrey ornithology during the twelve months ending Dec. 31st, 1906, is the appearance of the Hen-Harrier (*Circus cyaneus*) in what is probably an old haunt, if not a breeding-ground. As I hope to observe them again next year, it is not advisable to mention the precise locality, and will only say that it is situated in the south-western portion of the county. On referring to the diary below, it will be noticed that the female of a pair was shot at Shackleford in February, and it seems as if the survivor procured a fresh mate, and settled down in the area where subsequently observed.

The first occasion upon which I saw these birds was on May 28th, when I had a splendid view, both of the "Blue Hawk" and "Ringtail," as they quartered the ground in true "Harrier" fashion quite close to where I lay hidden amid rank heather and stunted firs. I spent the whole morning in the locality, and had my glasses in use nearly all the time. On Aug. 6th I took a friend to see them, and was again fortunate in having a good view, although on this day they were circling overhead the greater part of the time, only now and again descending to the heather. After a space of half an hour or so, during which they had been gradually working nearer to us, the female flew past the clump of pines in which we were concealed, and I think caught sight of us, for shortly afterwards both birds flew away, and, although we waited for a considerable time, they did not return. Between these dates several other persons noted them, among whom Mr. Gordon Dalglish may be mentioned as having seen the male on July 10th in the vicinity. When I discovered them, and after having shown myself, their behaviour certainly convinced me that a nest was not far distant; but, in spite of a long and exhaustive search, I regret that I am unable to verify



this conviction. Aug. 6th was the last time I saw the adults, but on the 28th of that month I found two large hawks, which I took to be immature *C. cyaneus*, near the old spot, but unfortunately was unable to identify them owing to their excessive wariness; on the same day I saw two more (possibly the same) some miles distant flying high overhead in a westerly direction. The appearance of these young birds is certainly suggestive, and it makes me deplore the fact that my searches for a nest were fruitless. Mr. C. H. Bentham saw either a female or young male on Oct. 27th at Frensham Little Pond, but it was mobbed and driven away by two Rooks almost before he could use his glasses.

Amongst other rare county species may be mentioned the Marsh-Warbler, Curlew-Sandpiper, Black Grouse, Greenshank, Lesser Tern, Blue-headed Wagtail, Spotted Crake, and the Golden-eye.

In point of rarity, the Marsh-Warbler (*Acrocephalus palustris*) and Curlew-Sandpiper (*Tringa subarquata*) are entitled to the premier position, as both are additions. With reference to the former, Mr. Bucknill writes:—"I cannot say that I have any confidence in including it in the list of the Surrey avifauna." I shared his opinion, for, excepting Mr. Blyth's (now discredited) observations during the early seventies in Battersea Park, the species had not the slightest claim to be included. As regards the Sandpiper, there is no authenticated record in 'The Birds of Surrey,' although the author mentions two or three which he presumes to have been taken within the confines of Surrey; but it is apparent to all that this wader has hitherto been admitted to the list on very meagre grounds indeed. It is therefore with great satisfaction that I record the Frensham example.

Alas! Surrey Black-game (*cf.* Saunders's 'Manual,' 2nd ed. p. 493) are on the verge of extinction, and I am sorely afraid that the present year will see the last of the species stamped out. I have received information—for which I am obliged—from Mr. G. W. Swanton, that in 1905 it still bred in a certain wild tract of country, although in greatly diminished numbers, only two pairs having been seen. I have not been able to examine this district personally to see if it is barren, but intend doing so during the present year. The only news of the species that

I have been able to gather during 1906 is unfortunately limited to one bird, and this (a Greyhen) I saw myself in the spring.

Both the Greenshank (*Totanus canescens*) and the Lesser Tern (*Sterna minuta*) are rare visitors, and it is surprising that no fewer than four of the latter have been seen during one year. All these visited Hedgecourt, which is a new locality for this, as well as for the Greenshank. The western lakes are generally the favoured stopping places for this class of visitor, but it seems that the ponds near Copthorne have been somewhat overlooked by the earlier writers, as very few records come from this district.

Since Mr. H. T. Booth saw three Blue-headed Wagtails (*Motacilla flava*) on Wimbledon Common in 1890 (Bucknill, 'Birds of Surrey,' p. 138), no others have been recorded, having probably been overlooked, although really I do not suppose it has occurred other than an extremely rare visitor.

The Spotted Crake (*Porzana maruetta*) has very seldom been observed in Surrey, and one has to go back to the eighties for records, although the species has no doubt visited the county since then, but, through its skulking habits, avoided detection.

After the Pochard, Tufted Duck, and perhaps the Wigeon, the Golden-eye (*Clangula glaucion*) is the most often seen of the *Anatidæ* in spring, autumn, and winter, and probably occurs annually on the western lakes. Although the records up to the end of 1905 are comparatively few in number, the times that this duck has passed without comment no doubt greatly exceed the recorded visits. Besides the occurrences noted in the diary, Mr. Dalgliesh informs me that a pair were shot by a keeper in Lea Park during the winter of 1905-6.

I have appended the observer's initials after each record; therefore C. H. Bentham's notes are designated "C. H. B.," G. Dalgliesh's "G. D.," and E. K. Ford's "E. K. F." In instances where initials are not given the notes are my own.

The year's diary is as follows :—

#### JANUARY.

7th.—Goldfinches feeding on burdock-seed ; Siskins and Grey Wagtail at Oxted ; Little Grebe on Barrow Green Pond ; Hooded Crow in Titsey Park, which is a favourite haunt (C. H. B.).

Large numbers of Siskins and half a dozen Pochard at Richmond. The latter are quite common in winter, and are hardly worthy of note; although generally in small parties, sometimes over one hundred occur.

14th.—Large flock of Ring-Doves at Old Oxted (C. H. B.).

21st.—Tufted Duck on Hammer Pond, and Magpies on Royal Common (G. D.). The latter are very rare in Godalming neighbourhood, and during recent years appear to have ceased to breed there. Bucknill, however, was able to assert (1900) that it still bred annually at Northbrook and Royal Common. Hooded Crow at Godstone (C. H. B.).

26th.—Enormous flocks of Sky-Larks at Eashing (G. D.).

27th.—Flocks of Meadow-Pipits at Richmond, where Herons were repairing their nests a few days later.

31st.—Blackbird singing a little about 6.45 a.m. (C. H. B.).

#### FEBRUARY.

4th.—Fieldfares at Tandridge (C. H. B.).

11th.—Large numbers of Teal and Mallard paired on Hammer Pond, and flocks of Stock-Doves in Peperharow Park (G. D.). Several Hoodies and about one hundred and fifty Bramblings at Titsey; Kingfisher at Oxted Mill stream (C. H. B.). Lesser Spotted Woodpecker (E. K. F.), Siskins, Redpolls, and Goldcrests in Richmond Park. The last named have been very numerous, and I have several notes prior and subsequent to this of all three.

17th.—Gannet seen on the Wey; fifteen Tufted Duck and Little Grebe in breeding plumage on Hammer Pond. (The Dabchick may always be seen here—L. B. M.) Female Hen-Harrier shot, the male escaping, at Shackleford (*cf.* Zool. 1906, p. 114).

18th.—Stock-Doves, Great Crested Grebe, and a party of twenty Hawfinches in Richmond Park. The erratic way in which the Grebes appear at the Penn Ponds early in the year is peculiar. On Feb. 18th there was one, but it had gone on the 20th, to reappear on the 21st; then only staying for a day, as on the 22nd, 24th, 25th, 28th, and 3rd March no Grebes were to be seen. On March 4th and 10th there was one, on the 11th three, 12th two, 17th and 18th four, and 20th two; whilst on

the 24th there were again three, after which only the breeding pair.

19th.—Sky-Lark singing (E. K. F.).

20th.—Kingfisher on Penn Ponds (E. K. F.), and at Oxted (C. H. B.).

#### MARCH.

1st. — Rooks building at Milford (G. B.), and at Oxted (C. H. B.).

2nd.—Coots paired, and ten Tufted Duck on Hammer Pond (G. D.).

3rd.—Although several pairs of Rooks have commenced building at Oxted, the majority still roost near Woldingham, about three miles distant (C. H. B.).

4th.—Eight Crested Grebes—pairing—on Wimbledon Park Lake.

6th.—Wind S.W.\* Male Wheatear on warren in Richmond Park (E. K. F.). This was reported in the 'Field' at the time, and I believe was the earliest for the year. Bucknill says in his book :—" Out of a number of records of its first appearance (the notes coming from all parts of the county), few are earlier than 30th March, and I think it may be concluded that its general period of arrival is about the week of which that date is the middle day." Of course the 6th is a very early date for Surrey, but in the neighbouring county of Sussex they frequently arrive at the beginning of March (*cf.* Borrer's 'Birds of Sussex,' p. 58). I have myself several early dates for Surrey, but none earlier than this.

10th.—(Golden Pheasant flushed by foxhounds from gorse on Winterfold Hill—H. Russell.)

11th.—Goldfinch at Broadham Green; this bird has not been so abundant as during winter 1904-5 (C. H. B.). Two female Wheatears at Richmond. Magpies and Great Crested Grebes at Virginia Water.

12th.—Greenfinch singing (G. D.).

24th.—A female Great Spotted Woodpecker "hammering" in Richmond Park. It is generally stated that the males alone "hammer," but this bird certainly had no crimson on the nape.

\* The wind had been from the south or south-west for three days before this.



31st.—Reed-Bunting singing a little (C. H. B.).

APRIL.

1st.—Rooks sitting at Tandridge ; several Hooded Crows and Stock-Doves at Titsey (C. H. B.).

2nd.—Grey Wagtail at Oxted (C. H. B.).

7th.—Wind E. Wryneck at Eashing (G. D.). Sand-Martins at Godstone ; Chiffchaff at Tandridge (C. H. B.). Chiffchaff and Swallow at Esher.

8th.—Wind N.E. Kingfisher and Swallow at Oxted ; Starlings still in bands (C. H. B.). Sand-Martins, Willow-Warblers, male Yellow Wagtail, six Tree-Sparrows (and a Barn-Owl disturbed by Jackdaws, at 11.45, in brilliant sunshine, soared high overhead until lost to view) in Richmond Park.

13th.—Mallard, Teal, and two Crested Grebes on Hedgecourt Pond, and six full clutches of Lapwing's eggs in fields adjoining (C. H. B.). Whinchat—wind W.—two Common Gulls (*Larus canus*), Curlew-Sandpiper, female Golden-eye, seven Crested Grebes, three Tufted Duck, and a Curlew (which certainly kept up the bird's reputation for wariness) at Frensham. The Curlew-Sandpiper was running along the side of the Little Pond, and allowed a close approach. I saw it examine several *Limnæa stagnalis* and one or two Planorbes, but it did not swallow any. The characteristic bill was a shade shorter, and perhaps slightly less decurved than usual, and I presume therefore that it was a bird in its first spring. When it rose (the white tail-coverts being then conspicuous), and as it flew rapidly up and down the arm of the pond, it whistled several times. The bird was in winter plumage, but showed a considerable amount of chestnut on the head and interscapular region.

14th.—Pied Flycatchers at Bramley (*cf.* Zool. 1906, p. 313).

15th.—Curious eggs of the Blackbird, from Abrooke Common, Esher. The centre one is the first I have seen zoned round the smaller end, and must be very uncommon. (See illustration on p. 98.)

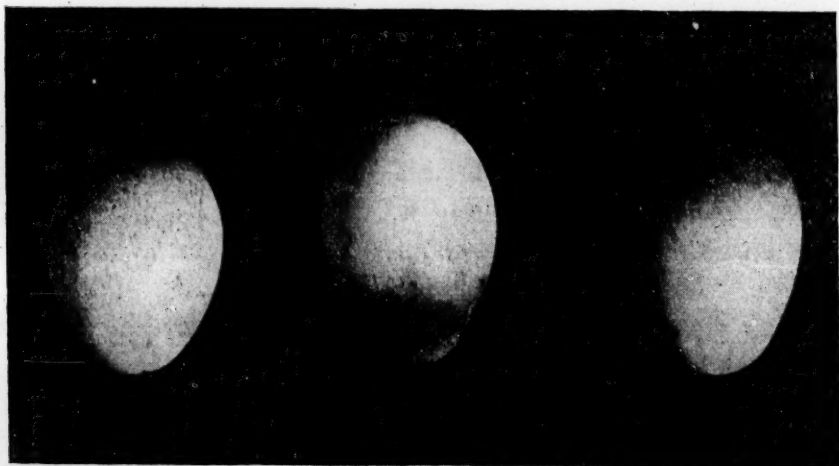
16th.—Wind S.W. Cuckoo heard at Oxted (C. H. B.). House-Martins at Eashing (G. D.).

21st.—Wind S.W. Several Nightingales heard and seen at Addington (C. H. B.) and Grayswood (G. D.). Pair of Tufted

Duck and a couple of Common Sandpipers in Richmond Park ; the latter stayed until May 7th. Mr. Dalgliesh heard Wood-Warbler at Brook.

22nd.—Wind N.W. Linnets still in flocks at Limpsfield (C. H. B.). Sandpipers at Thursley and Frensham ; also twelve Crested Grebes, Redstart, numerous Snipe, drake Golden-eye, and female Tufted Duck at the latter.

24th.—Wind W. Spotted Flycatcher at Thursley (G. D.). Marsh-Warbler (*Acrocephalus palustris*) at Penn Ponds, Richmond Park (E. K. F.). I print the following letter received from my friend with regard to this rarity :—"I first noticed this bird on April 24th, 1906, and watched it almost daily until May 8th.



CURIOUS EGGS OF THE BLACKBIRD.

Between these dates, no matter when I went up to the Penn Ponds, I was certain of finding it somewhere—either at the edge of the water, creeping up and down the shrubs, pecking at the stalks, or on the bank ; sometimes, but not often, in the nearest trees. It used to make curious little darts into the air, like a Dartford Warbler, and occasionally flew out and back in a circle, as a Flycatcher does. Its colour was uniformly olive-brown above, slightly darker on the head ; under parts buffy white ; the legs were so thin that it was almost impossible to see the colour, but, as far as I could judge, they were pale brown. I never heard the bird utter a note of any sort. On the 8th

May, whilst I was following it about as usual, it flew a few yards ahead on to the bank of the upper pond, where it joined a group of other birds, apparently Warblers, for they all looked exactly alike as they rose, and flew away. I never saw it again. I was a little in doubt about recording this bird for your report, but Mr. Warde Fowler's remarks at the conclusion of his article on the Marsh-Warbler in 'The Zoologist' (1906, pp. 401-9) confirms my belief that the bird I saw was one—the slightly darker head and entire absence of any rufous tinge on the body are almost positive proof." Mr. Warde Fowler states that this species is the latest of our summer visitors to reach its breeding-haunts, and he says that May 30th is the earliest he has seen them. It is therefore with some hesitation that I insert the above record and letter.

26th.—Snipe near Bramley (H. Russell). Nuthatches, Creepers, and Marsh-Tits together, and twenty-six Herons at Richmond (E. K. F.). The superintendent of the Park informs me that there are now between twenty and thirty *nests* in the Sidmouth Wood, and a solitary pair generally build in the Isabella Plantation.

29th.—Wind W. Blackcap heard at Oxted (C. H. B.).

30th.—Magpie's nest at Crowhurst (C. H. B.). Five years ago I knew of two nests at Oxshott, and since then they have bred at Wisley, Virginia Water, and one or two other places; but it is now one of our rarest breeding birds.

#### MAY.

1st.—Spotted Crake at Brook; was also seen subsequently. Pochard sitting in Lea Park, where Common Sandpipers were reported several times about this date (G. D.). The Pochard note is most interesting, as these are genuine wild birds, and I believe this to be the first time it has laid eggs in the county; unfortunately these were not hatched, and, whilst the female left the Park in late summer, the male stayed on, being last seen there on Sept. 8th.

2nd.—Wind S. Whitethroat at Thursley; Kestrel sitting in Lea Park (G. D.).

3rd.—Wind S. Grasshopper-Warbler heard at Wisley (G. D.).

4th.—Wind S.W. Turtle-Dove at Woldingham (C. H. B.).

5th.—Wind S.W. Lesser Tern, Swift, and some Snipe at Hedgecourt Pond (C. H. B.). Whitethroat and Swifts in Richmond Park.

7th.—Sedge-Warbler in Richmond Park (E. K. F.); also heard at Oxted on the 5th (C. H. B.).

8th.—Wood-Lark at Brook (G. D.).

11th.—Wind S. Nightjar at Brook (G. D.). Early.

13th.—Sand-Martins—which are exceptionally abundant about Oxted, Godstone, and Limpsfield this summer—have established new colonies on Limpsfield Common and near Barrow Green (C. H. B.); also in the sand-pits at Oxshott, where, as far as I can see, they do not appear to have been molested very much, in spite of the numerous picnic parties, “school-treats,” &c., which frequent this locality. Three pairs of Crested Grebes at Virginia Water, and twenty—pairing—at Frensham, where there were also a pair of Golden-eyes, an immature Blue-headed Wagtail which showed a few brownish feathers on the breast, and a Common Tern. This is very late to see adult Golden-eyes so far south.

14th.—Wind N.E. Red-backed Shrike at Thursley (G. D.).

20th.—Sparrow-Hawk's nest with six eggs in an unfrequented larch-wood at Chart (C. H. B.).

22nd.—Pair of Grey Wagtails at Oxted Mill; also seen the following day. Although this Wagtail is a regular winter visitor to this neighbourhood, it has generally left by the first week in April (C. H. B.).

23rd.—Wind S.E. Corn-Crake at Oxted (C. H. B.).

26th.—Drake Teal on Hampton Lodge Pond; also seen on the 28th.

27th.—Hobby on Royal Common. I had a good view of this bird as he flew hurriedly out of a beech quite close to where I was standing.

28th.—Chiffchaff's nest with eleven eggs at Brook (G. D.); evidently the produce of two hens.

29th.—Wood-Lark and Lesser Redpolls building in the Godalming district.

30th.—Hooded Crow found hanging on tree at Vachery Pond; it had been dead for at least three or four days. This is a very late date. Lesser Whitethroats somewhat numerous near Cranleigh.



JUNE.

1st.—Twelve Pintails hatched on Enton Mill Pond—parents pinioned (G. D.). I found Little Grebes, Snipe, and Teal all breeding in several places in South-western Surrey about this date, but for obvious reasons it is better not to mention exact localities.

2nd.—Immature Greater Black-backed Gull, female Tufted and Red-legged Partridges at Frensham Little Pond.

3rd.—Kingfisher and Heron at pond on Puttenham Common.

4th.—Linnet's nest with six eggs in ling about a foot from ground on Walton Heath (C. H. B.).

5th.—Kingfisher on Frensham Little Pond.

10th.—Drake Teal and brood of four Crested Grebes (three of which afterwards perished) on Penn Ponds. Nightjar "churring" at 6.40 p.m.

11th.—Sky-Lark perched and singing on top of hawthorn (G. D.).

16th.—Dartford Warbler seen by Mr. Dalgliesh.

17th.—Garden-Warbler and Sparrow-Hawk near Elstead.

18th.—Nest of Great Spotted Woodpecker with young in Godalming district (G. D.).

22nd.—Mr. Harold Russell informs me that Little Grebes are to be seen regularly in winter on ponds in the Tillingbourne Valley, and that there is always a pair nesting near Hascombe; that, although Grasshopper-Warblers are usually noticed on migration at Shere Heath, none have been observed this year; and that Stock-Doves are very rare, although a pair probably nested in Albury Park last summer.

24th.—Wood-Lark in Richmond Park; I heard this bird singing in the evening of the previous day, and, looking again the next morning, was lucky enough to obtain a good view.

JULY.

3rd.—White Wagtail at Penn Ponds (E. K. F.).

17th.—Heron at Godstone Pond, and four Goldfinches at Limpsfield on the 21st (C. H. B.).

22nd.—Pair of Grey Wagtails at Oxted Mill Pond; one also seen on the 29th (C. H. B.).

28th.—Barn-Owl heard at New Oxted; five Herons on the

wing at Westcott, and Red-backed Shrikes noticed to be very numerous on Ranmore Common (C. H. B.).

AUGUST.

4th.—Lesser Spotted Woodpecker on apple-tree in Elstead, quite tame, and allowed us to watch it for some time. Grass-hopper-Warbler seen and heard in the evening at Cutt Mill.

5th.—A Dunlin, having black gorget well marked, Common Sandpipers (others noted later), Blue-headed Wagtail, and several Black-headed Gulls at Frensham. Gulls are generally to be seen here during late summer and autumn. Numbers of Teal seen about this date.

8th or 9th.—Common Gull shot in Lea Park (G. D.).

12th.—Lesser Black-backed Gull and a single Ringed Plover at Frensham.

13th.—A party of Herons, said to be two old and five young, have been frequenting the neighbourhood of Shere for some time past. They were suspected of nesting in Albury Park, where there was a solitary nest a few years ago, but the nearest heronry is in Peperharow Park. Nightjars have been reported as unusually numerous on Holmbury Hill and Peaslake Common; on the other hand, the pair generally noticed on Shere Heath have not been heard or seen. Willow-Warblers singing well—(also in other districts up to Sept. 23rd—L. B. M.)—(Harold Russell).

16th.—The pair of Great Crested Grebes nesting at Wimbledon only succeeded in rearing two young.

19th.—Teal and Black-headed Gulls on Penn Ponds.

22nd.—Kingfisher and Heron at Barrow Green (C. H. B.).

23rd.—Lesser Spotted Woodpecker calling at Godstone (C. H. B.).

24th.—Two Green Sandpipers, fifty Mute Swans, and five Herons at Hedgecourt Pond; a small "charm" of Goldfinches near Lingfield (C. H. B.).

26th.—Ringed Plover, and Rook with large white patches on primaries of each wing at Frensham Great Pond.

27th.—Lesser Redpoll in beautiful plumage on Royal Common; Grey Wagtails at Thursley; Teal and Green Sandpipers seen on Forked and other ponds several times on and after this date.

28th.—Great Spotted Woodpecker, Wood-Lark, two Grasshopper-Warblers, and six Dartford Warblers seen near Hindhead. Over twenty old and young Grebe and an immature Cormorant at Frensham Great Pond. I saw the latter arrive and depart; it only stopped for about fifteen minutes, dived continuously, and, as far as I could see, caught some fish each time.

29th.—Greenshank (?) at Devil's Jumps. Little Grebes and Hobby at Frensham. I noticed the latter chase and strike down a Swallow—a most interesting sight.

30th.—Garden-Warbler at Thursley, and White Wagtail at Frensham. Jack-Snipe, Green Sandpipers, Teal, and plenty of Wild Duck in the evening at Devil's Jumps. The Jack is exceptionally early, but I had this bird under observation for a considerable time, being within ten feet of it (behind a screen of pine-branches), so am positive that I was not mistaken.

#### SEPTEMBER.

8th.—Brood of three Dabchicks just hatched in Lea Park (G. D.). Common Sandpiper at Richmond.

11th.—Kingfisher at Penn Ponds (E. K. F.). Flock of between fifty and sixty Swallows, apparently on migration, flying over Limpsfield Common (C. H. B.).

12th.—Small flock of Linnets seen, and Chiffchaff heard in Richmond Park (E. K. F.).

16th.—About one dozen Little Grebes on Barrow Green (C. H. B.).

22nd.—Some twenty-five or thirty Goldfinches on Itchingwood Common (C. H. B.). Three Teal and first addition to numbers of Mallard noted on Penn Ponds. I might here add that the Teal no longer breeds at Richmond (Hudson, 'Birds of London,' p. 263).

23rd.—About a dozen Goldfinches on Littleworth Common.

29th.—Heron, a single Snipe, and scores of Black-headed Gulls at Kew, and Kingfishers on Thames at Richmond.

30th.—Grey Wagtail at Godstone; several French Partridges on the North Downs near Oxted; these birds are not uncommon on the lower parts of the hills (C. H. B.).

## OCTOBER.

6th.—Flock of about four hundred Lapwings, two Green-shanks, twenty Goldfinches, and two immature Lesser Terns at Hedgecourt (C. H. B.). Mr. Bentham writes:—"The Green-shanks were resting on the mud near the water, and permitted me to approach quite closely, so that with a good glass I could plainly discern the slight upward curve of their bills. I noticed that they jerked their heads backwards in exactly the same way as a Redshank or a Ringed Plover will do. The Lesser Terns were busily engaged in fishing, . . . and I had many opportunities of studying them closely."

7th.—Kingfisher near Limpsfield (C. H. B.).

13th.—One Lesser Tern (immature), four Herons, and one Hooded Crow at Hedgecourt (C. H. B.).

14th.—Many small flocks of Mistle-Thrushes on the hills, and two Redwings arrived at Barrow Green (wind N.). A good many Swallows and a few House-Martins still haunting the marshy fields near Oxted (C. H. B.). Five Pochard, Sedge-Warbler, Bullfinch, Kingfisher, and great numbers of Coot (but no Lapwings) at Frensham.

15th.—Mr. Dickinson informs me that Swallows are still in full force at Carshalton. Several parties of Golderests amongst the furze on Limpsfield Common; two Hooded Crows and a small flock of Redwings near Titsey; Kestrels have been of frequent occurrence on the North Downs near Oxted during the last two or three weeks (C. H. B.). A good many Fieldfares and Redwings have been seen in most parts of Surrey this year, although, at Shere, Mr. Russell informs me that only a few of the former (and no Redwings) have been noticed, and that these only occurred during the sharp frost in late December.

19th.—An albescent Redbreast in the Terrace Gardens, Richmond, with breast and back white, wings and tail brown, but rufous colour absent except for a small spot on forehead; the legs were flesh-coloured (E. K. F.). I saw this bird later, and gathered that it had been there since June, whilst it was observed up to about Christmas.

20th.—A single Goldfinch singing in a garden at Oxted (C. H. B.). Tree-Sparrow at Ham; six or seven Kingfishers, eighteen Mallard, seven Herons, Grey Wagtails, Dabchick, Snipe,



and Bullfinches near Leatherhead. Pied Blackbird on Great Bookham Common.

27th.—Nine Crested Grebes—at least three young—and two female Pochard on the Great Pond ; and a mixed flock of Pochard and Coot on Frensham Little Pond ; also a solitary Golden-eye—probably a young male—which dived repeatedly, never remaining on the surface for more than thirty seconds (C. H. B.).

Date uncertain.—Albino Pheasant on Ranmore Common (H. Russell).

#### NOVEMBER.

4th.—Six Lesser Redpolls on alders at Godstone Pond, and at Lingfield on the 17th (C. H. B.).

7th.—Very mild. Song-Thrush singing at Sanderstead, almost as well as in spring (C. H. B.) ; and elsewhere (L. B. M.).

11th.—Three Goldfinches at Oxted ; Carrion-Crow at Titsey (C. H. B.). About this date there seems to have been an influx of Hooded Crows, and Mr. Bentham sends me several notes of having seen parties of varying numbers in his district. Generally speaking, it is probable that since “the good old days” this member of the *Corvidæ* has never been more numerous than at the present time. Grey Wagtails at Virginia Water.

18th.—A female Shoveler on Penn Ponds, in company with the pair of pinioned birds kept there, which no doubt attracted it. This may have come over from Kew Gardens. Two House-Martins on Richmond Hill.

25th.—Goldfinches near Barrow Green, and large numbers of Pigeons in different parts (C. H. B.). Pied Jackdaw at Barnes ; Hawfinch at Blindley Heath, two Kingfishers at Godstone Pond, and great numbers of Teal, Lapwings, Snipe, and Mallard at pond near Hedgecourt. There were probably some two hundred and fifty to three hundred Duck, three-fifths being of the smaller species.

Date uncertain.—Mr. Russell writes :—“ I saw a Hawfinch in the garden during November, and the gardener tells me that numbers with young used to visit the peas. They must have bred in the neighbourhood. I am told that on Leith Hill numbers come to the peas ; they are very shy, but not, I expect, very rare.”

## DECEMBER.

1st.—Sparrow-Hawk at Croham Hurst.

2nd.—Female or young Golden-eye at Penn Ponds. This was very wild, and would not allow a near approach, flying up every now and again to settle farther away. A few days later a friend got close to it two or three times by running along the bank whilst the bird was diving, but it always took fright on coming to the surface and seeing somebody near it. The bird's wildness certainly points to its being truly feral, and not a visitor from Kew.

9th.—A good many Teal, Snipe, and Mallard, two Herons, a Kingfisher, and three large Gulls—probably *L. fuscus*—at Hedgecourt, and Bullfinches in the neighbourhood.

16th.—Pair of Tufted Duck on Penn Ponds.

23rd.—Cold, hard frost. Wood-Pigeons cooing in many places about Oxted, and a Brambling on alders at Mill Pond (C. H. B.). Lesser Redpolls in small flocks reported from different parts. Seven Tufted Duck and Grey Wagtails at Hammer Pond.

24th.—Flock of Pochard, Coot, and Tufted Duck on Frensham Little Pond. A large number of Coot fell to the guns in the morning, but the ice stopped shooting to any extent. Woodcock flushed from heather on Stony Hill.

25th.—Numbers of Full and Jack (?) Snipe, but no Teal, by the River Wey at Elstead, having left the open country through the severe frost.

26th.—Flocks of Sky-Larks drifting over the snow-clad country, and immense numbers of Ring- and Stock-Doves in the woods.

30th.—Pied Blackbird at Titsey (C. H. B.).

In conclusion, I wish to convey my heartiest thanks to all correspondents who from time to time throughout the past year have so kindly forwarded me notes containing items of considerable interest. It is to them and through their unmerited kindness that the preparation of this report has been found possible.

## DESCRIPTION OF WILD DUCKS' DOWN.

BY W. H. WORKMAN, M.B.O.U.

MR. HARVIE-BROWN, in 'The Zoologist' for October last, gives some most interesting descriptions and directions for dealing with the downs of various species of Ducks, which will prove very useful to many of us younger ornithologists who cannot get access to very early volumes of this Journal and the 'Ibis.'

When I read the above quoted paper I expected we should have a string of notes from collectors all over the country, with descriptions of the British breeding Ducks' downs; but, strange to say, nobody has taken up the thread. This made me look round my collection and amongst my friends for specimens of downs, and I am greatly obliged for kind help to Dr. Darling, Mr. Foster, and Mr. Malcomson—all experienced naturalists, and well acquainted with our birds. I have selected a few species from which the old birds were actually seen on or leaving the nest, and I think, with Mr. Harvie-Brown, it is much better not to give descriptions of downs from dealers, or not quite authenticated. I hope we will in time get together, in one journal, descriptions of all the British species.

I keep my collection in small glass-topped boxes, about two inches square, with a full description noted on bottom of each, *viz.*—name, locality, date, name of collector, and notes about parent bird being seen—then in the bottom I put a small piece of naphthaline to keep out insects. This plan, if one has not got down and clutches of eggs together, answers well, and the little boxes, when packed full, hold quite enough to show the colour in bulk, and look well kept in a cabinet drawer.

I examined the specimens given below in a good light, without sunshine, and I found the best way to hold the single sprays for Sommerfeldt's method was to catch the little shaft with a pair of forceps, or in the split at the point of a steel pen; this latter way I found very handy, as you can lay it down while writing

descriptions without its being blown away. The best method to hold the down is against a very dark background two or three feet away, when with a three-power pocket-lens the colour and construction can be carefully observed and noted. The pocket-lens suits much better than a microscope, which I found too powerful, giving too small a field; besides, putting the down between glass slips takes away from the natural shape and colour.

I find in Sharpe's 'Handbook of British Birds' a fair description of each down—probably in bulk—given after his note about the nest and eggs. The same is also given in Seebohm's 'Eggs of British Birds,' but not so good. I hope Mr. Dresser, in his new book, 'The Eggs of the Birds of Europe'—a work in which the three-colour process of photography has been so successfully applied to eggs—will make some attempt to adopt this beautiful printing to the Duck's down when he comes to describe their eggs.

I have included below downs of Mute Swan and Canada Goose, both found wild about here. I believe—at a lake in this neighbourhood—the keepers have tried without success to frighten away and shoot this latter species; it was, of course, originally introduced.

#### DESCRIPTIONS OF DOWNS.

SOMMERFELDT'S METHOD.	IN BULK.
<p><b>TADORNA CORNUTA.</b>—A large white down loosely put together, with a very white centrum. Rami long and thin, with radii medium length, getting shorter as they approach the tip, where they lie much closer, and form into a hair-like ending; through the glass this appears to be made up of gradually shortening fine radii. (See Class A, No. 1.)</p> <p><b>CYGNUS MUTUS.</b>—Down very large, all pure white; rami long; radii fairly short, lying close, and not getting much shorter towards the tip, as in Sheld-drake. (See Class A, No. 2.)</p>	<p><b>A. WHITE DOWN.</b></p> <ol style="list-style-type: none"> <li>1. <i>Sheld-drake.</i>—Down large and loose, of a dull grey white, impossible to pick out centres, which only seem a little whiter.</li> <li>2. <i>Mute Swan.</i>—Down very large, not unlike No. 1, but tips not so fine; it is whiter.</li> </ol> <p><b>B. WHITE-TIPPED DOWNS.</b></p> <ol style="list-style-type: none"> <li>1. <i>Mallard.</i>—Down dark brown, with fairly large white centres; the tips quite distinct, whitish brown; the down generally not compact, but feathery.</li> <li>2. <i>Red-breasted Merganser.</i>—This down is light greyish brown, with</li> </ol>



## SOMMERFELDT'S METHOD.

ANAS BOSCAS. — A fairly thin light down of a dull brown; centrum pure white, fading through brown to the rami, which are long, with a greyish white tip composed of the rami and radii, which gradually get lighter at ends; radii medium length, lying close. (See Class B, No. 1.)

MERGUS SERRATOR. — I cannot quite agree with Sommerfeldt's description, which may be quite correct for the down of a Northern European bird, but my specimen from Co. Down, Ireland, is a light brownish grey, not bluish grey; otherwise the description is very good. (See Class B, No. 2.)

BRANTA CANADENSIS. — This is a long loose down, with a general colour of light greyish brown to white. The centrum is white, with a dusty tinge. Rami long, and of a light brown, ending in a white tip. The radii are very fine, some having white tips; they seemed not so regularly distributed along the rami, but some may have got frayed off owing to their fine texture. (See Class B, No. 3.)

FULIGULA CRISTATA. — This medium-sized down is of a dusty brown colour, with a whitish brown centrum, not very distinct when viewed separately, more in evidence in bulk; rami fairly long, of a light dusty brown; radii, which are not long, mostly have a distinct white tip; this, I think, accounts for the general dusty colour. (See Class C, No. 1.)

## IN BULK.

grey centres, and very decided grey tips.

3. *Canadian Goose*. — Down greyish brown, nearly white, about the size of *Mergus serrator*, with white centres and light tips; some centres much whiter than others.

## C. DARK DOWN, WITHOUT WHITE TIPS.

1. *Tufted Duck*. — Down of a dull brown colour, with pale centres, nearly white just at the shaft. I think this could not be classed with white-tipped downs, although a few have pale tips.

## NOTES AND QUERIES.

## MAMMALIA.

## Notes on the Occurrence of Lesser Horseshoe Bat in Devonshire.—

In view of the small number of instances in which the Lesser Horseshoe Bat (*Rhinolophus hipposiderus*) has been recorded as taken in Devonshire, and of the fact that none of these cases occur in the neighbourhood of Exeter, the following notes may be worth placing on record. Early in December of last year, being anxious to replace the existing old and faded Bats in the Royal Albert Memorial Museum, Exeter, I consulted a list of local mammals published in the 'Transactions' of the Devonshire Association, with the object of seeing what could be obtained locally, and there found a manuscript note stating that "both Greater and Lesser Horseshoe Bats were said to have been taken at Pocombe Quarry in 1879." This quarry is about a mile west of Exeter. Acting on this information, I visited Pocombe a few days later. There was no sign of either species in the quarry, but I took a male Lesser Horseshoe in the crevice of a rock near there, and on revisiting the place two days later found a second male not many yards from where the first was obtained. The second one I had alive for five days, but, although insects were placed in its box, it then died, apparently without having made any attempt to feed. My next expedition in search of Bats (Feb. 2nd) was to Duryard, not quite a mile north-east of the city. Here, in a large disused cellar, I found two males and one female, all hanging separately, but within eight or ten feet of one another. I was surprised at this, having always understood that the sexes usually, if not invariably, frequent separate retreats. These three were also kept alive, but one died on the ninth day, the other two on the tenth day. On February 16th I searched some limestone rocks about ten miles west of Exeter, and in a cave there found a male, which I replaced on the rock. It is curious that those kept should not have lived longer at this time of year, when they are supposed to be hybernating, unless under natural conditions they wake up and feed upon the insects in their retreats. There was certainly a large amount of insect life in the cellar, and in the cave visited yesterday, but, as far as could be seen, none in the rock where the first two were taken.

Those kept in captivity seemed hardly to change their position while I had them, and all died hanging to the rock which was tied to the top of their box. It is strange that in four outings in search of Bats I should have found six of this one species, which is nowhere considered common, without finding one of either of the reputed common species; and it probably points to the conclusion that—at any rate in this district—the Lesser Horseshoe Bat is not so uncommon as is generally supposed, for the fact that five males were found to only one female would lead one to suppose that several were overlooked, unless the proportion of males to females is very great. — EDWIN HOLLIS (Royal Albert Memorial Museum, Exeter).

## AVES.

Fieldfare and Redwings in London.—On Feb. 7th last I saw a Fieldfare (*Turdus pilaris*) in Hyde Park. The following day it was still in the same place—among some shrubs near the band-stand, and several Redwings (*T. iliacus*) were there also looking for food. I do not think either of these are common visitors to London.—FLORA RUSSELL (2, Audley Square, London).

Smew and Mergansers at Yarmouth.—On Jan. 30th last a fine adult male Smew (*Mergus albellus*) was shot on Breydon. It is now fourteen years since the last old male was killed, which was shot on Breydon Broad, January 10th, 1893. This I purchased in the flesh (*cf.* Patterson's 'Nature in Eastern Norfolk,' p. 198), and, strange to say, both these birds were shot by the same gunner, Mr. F. Clarke. These birds are mostly met with during severe winters, like the present one, but then only sparingly. The sharp contrast in the male plumage makes it very conspicuous, while it is one of the most handsome, and also the smallest of the genus; but young birds are more often observed, and two were killed three days previously. A male Red-breasted Merganser (*Mergus serrator*) has also been shot in the neighbourhood, together with several immature Goosanders (*M. merganser*). — B. DYE (Row 60, No. 10, Great Yarmouth).

Eared Grebe in Belfast Lough.—I had the pleasure of examining, on Feb. 28th, a fine specimen of the Eared Grebe (*Podiceps nigricollis*), which was shot on the 28th by R. H. Leeke, Esq., of the Rifle Brigade, now stationed at Holywood, who brought it to Messrs. Sheals, of Corporation Street, Belfast, for preservation, where I saw it in process of setting up. It proved on dissection to be a male. This specimen was coming into summer plumage, the ear-tufts being well developed, and

the sides just beginning to change to chestnut-brown. This Grebe is now known to breed in England (*cf.* Zool. 1906, p. 315, where a most interesting note is published by Mr. O. V. Aplin), and, according to Ussher & Warren's 'Birds of Ireland,' it has occurred about twenty-one times in this country, but only about three records being stated for this part of Ireland, and so it may be considered a rare visitor to our waters. It was accompanied by two other birds, presumably of the same species. I hear a Snowy Owl was shot somewhere in the neighbourhood lately. This year Ducks of various species have been very common on Strangford Lough; they include Mallard, Wigeon, Sheld-drake, Shoveler, and Brent Geese.—W. H. WORKMAN (Windsor, Belfast).

**Westward Movement of Birds during Snow.**—As Mr. Ussher's request for observations from the south coast of England (*ante*, p. 33) has elicited but a single reply, and that from an inland locality (*ante*, p. 74), possibly the following notes from the Sussex coast may prove of interest, and lead to the publication of observations on this interesting subject from other localities. In this district the snow commenced during the night of Dec. 25th, and the following days witnessed a remarkable movement of birds along the coast. During the whole of the two following days there was an almost continuous stream of birds passing westward. My own observations did not begin until Dec. 27th, on which day the movement seemed to be mainly confined to Thrushes and Redwings; but I am informed that on the previous day both Golden and Green Plover were moving westward in considerable numbers. Snow fell again during the night of Dec. 27th, and I spent the whole of the following day on the coast in the vicinity of Rye Harbour. On that day the westward movement was still in progress, though to a much less extent, the species moving being chiefly Thrushes, Redwings, and Sky-Larks. I cannot say when the movement ceased, as I was unable to make any further observations during the next few days. I examined several Redwings that had been killed during the migration, and noticed that they were all in very poor condition. It may also be worthy of mention that at the same time there was a considerable influx of Bramblings in the Hastings district.—L. A. CURTIS EDWARDS (31, Magdalen Road, St. Leonards-on-Sea).

As confirming Mr. Robert Morris's observations (*ante*, p. 74) in Sussex, and in amplification of Mr. Ussher's suggestion (*ante*, p. 33), I desire to state that vast flocks of Starlings, Larks, Finches, and Lapwings passed over this town, flying due west, on Dec. 26th last. This flight was followed by a much larger migration on Dec. 27th, and the movement practically ceased on Dec. 28th. It is undesirable to



exaggerate, but I can truly state that this immense army of the feathered kingdom—flying from the bitter snow through the “hard froze fields of air” to lands of greater promise and of more genial climate—could only be estimated in numbers at hundreds of thousands; in fact, the flight was so remarkable that I have been much astonished that more notice has not been drawn to such a striking incident. The omission can only be explained by the fact that it is always easier to leave others to undertake an effort than to make it oneself. On the afternoon of Dec. 27th, I made an excursion to the fields some miles out of the town, and I found every patch of ground which was only slightly covered with snow comparatively alive with small birds, principally Larks, and along the seashore at the beach limit Finches—principally Chaffinches—were in large numbers. In the squares and enclosures of this town could be seen small flocks of Redwings and other members of the *Turdidæ*. An interesting question is—was this great movement at the end of December local only as regards the United Kingdom, or was it a vast influx of birds from Northern Germany and Holland? I am inclined to think that, considering the migration was such an extensive one, that it emanated from the Continent.—H. PETERS BONE (28, Adelaide Crescent, Brighton).

ON Sunday, Feb. 17th, there was a considerable migration of what I think must have been almost entirely Song-Thrushes (*Turdus musicus*). I was walking home about midnight, and the whole time (some twenty minutes) frequently heard the well-known call-note; the birds appeared to be going from north-west to south-east, and must have been flying very low. I only heard once what might have been the note of the Redwing (*T. iliacus*). Since the cold spell birds—and particularly *T. musicus*—have been very scarce about here. The night of the 17th was very dark, with a westerly wind. Had this migration anything to do with the approach of the cold weather of the last few days? On Feb. 21st I saw eight Herons (*Ardea cinerea*) near here, standing together in a field away from the river. As we have no heronry to speak of within many miles, this number seems very unusual, and may possibly be accounted for by the gale then still blowing. On Feb. 22nd, though the ground was covered with snow, and a piercing wind blowing, a Chaffinch (*F. caelebs*) was singing, and a Wood-Pigeon (*C. palumbus*) was using its spring note; the latter are not at all common here this winter.—THEED PEARSE (Bedford).

Swiss Birds in July, 1906.—In my summer chaplaincy in 1906 I was not so fortunate in my observations as in the preceding year. My duty was at Thusis, at the entrance of the celebrated Via Mala, and, I  
*Zool. 4th ser. vol. XI., March, 1907.*

might say, at the gate of the Engadine. The Hotel Via Mala, where we stayed, is delightfully situated just above the confluence of the Hinter Rhein, the Albula, and the Nolla, at a height of 2500 ft. above sea-level, and is about eighteen miles from Chur or Coire, the capital of the Grisons. It is surrounded by mountains, the highest of which is Piz Beverin, 10,000 ft. The scenery all round is of an enchanting nature, and until lately the hotels were crowded with tourists in summer; the number has, however, diminished since the Albula Railway to St. Moritz (thirty-eight miles) was opened, as many travellers prefer not to break the journey.

June 30th.—Arrived, and found many birds singing in the grounds of the hotel. In addition to our usual English songsters, I noted the Serin Finch and Black Redstart.

July 2nd.—Birds plentiful, but Crested Tit the only notable.

3rd.—Heard *Syrnium aluco* near Sils at 8.15 p.m.

4th.—Bonelli's Warbler very numerous; familiarized myself with its call-note.

6th.—Marsh-Warbler singing delightfully near the Albula. Cuckoos and Siskins also singing.

7th.—Beautiful morning. Charming bird-concert in the grounds—Garden-Warblers, Blackcaps, Blackbirds, Redstarts, Serins, and many more.

9th.—Whinchats near Canova; heard also *Picus canus* for the first time here. We often heard this bird at Schinznach and Strassburg last year.

10th.—Excursion to Bellagio *via* Splügen Pass. We occupied the banquette in the diligence which started from Thusis at 6.35 a.m., and passed through the Schamzerthal—"Schöne Wiesen, Wälder, Weisen." The only birds noted on the Pass—7056 ft.—were Alpine Choughs and Meadow-Pipits, though the Bernhardin close by was formerly called "Mons Avium" or "Vögelberg"—so many migrants passed by every year. We reached Chiavenna—"Schlüssel der Alpenwelt"—at 4.30 p.m., by those wonderful "zig-zags," and then went on by train and boat to our destination at Bellagio, on Lake Como, where we arrived at 9.10 p.m., after a memorable and delightful day.

11th.—Nightingales in full song close to our hotel, 'La Grande Bretagne,' and also near the Villa Serbelloni. A few Italian Sparrows also about, and the Black Kite, as usual, coursing over the lake. Bellagio is certainly a paradise, and if birds would sing anywhere, one would not wonder at them singing there, even though the time of the singing of Nightingales was past and over.

12th.—Left Bellagio for St. Moritz *via* the Maloja Pass at 8.42 a.m., and arrived at 7.55 p.m. The inscription on a house in Silva Plana took my fancy greatly—"Ille terrarum mihi præter omnes angulus ridet."

13th.—An almost unprecedented snowstorm, so that it was hopeless to search for birds, as I had intended. The hotels were crowded, and all the fires surrounded.

14th.—Left to return to Thusis. The country covered with snow, the mountains glorious, and the pines bending—some broken with the weight of the snow. As we slid down cautiously for about 3500 ft. in the wonderful Albula Railway, through avenues of pines, the sight was, indeed, marvellous. Some Americans in our carriage were loud in their admiration; one said, "it was an experience never to be forgotten"; whilst the Germans kept up constant cries of "Schön! Schön!" At Thusis we found shrubs, bushes, and part of the glass roof of our hotel broken down, and the director said that never in his experience had there been such a snowstorm in July before.

17th.—Crested Tits in the woods.

18th. — Kestrels—called here "Wanderli"—plentiful at Tarn, 5000 ft. We saw one Alpine Swift flying with the Common Swifts, and Herr Arpagaus pointed out to us a pair of Ravens in the field below the Pension Heinzenberg.

19th.—Heard notes which I could not for some time identify, but found afterwards proceeded from Alpine Swifts, high in the air; they seemed to be nesting in the Crapteig, about 5000 ft. high.

20th.—Rottanbrunnen. Sedge-Warblers singing, and Crag-Martins around the great rock over the Rhine.

21st.—Great fire on the Dorneschleg nearly opposite; the whole village of Scheid destroyed save two houses.

26th.—Five Tits in evidence not far from the hotel—Great, Coal, Blue, Crested, Marsh.

As we left on the 30th, I was unable to add to my list of sixty-eight species on the whole tour to seventy-four in the year 1905.

It is remarkable that the following common birds at home were not observed:—Mistle-Thrush, Stonechat, Hedge-Sparrow, Sand-Martin, and Willow-Warbler. This last bird is very rare in most parts of Switzerland. — CHARLES W. BENSON (Rectory, Balbriggan, Co. Dublin).

N.B.—Perhaps some of your readers could mention localities in Switzerland where one would be pretty sure to observe the Alpine Accentor.

**Marked Birds.**—In the next number of our 'Annals of Scottish Natural History' (April) will appear a long list of numbers, which are those of soft zinc labels, which are attached to the *left* legs (for the most part) of Starlings, which have been caught, marked, and liberated during December, January, and up to the date of February 10th, 1907. I would be obliged by your giving this information a place in 'The Zoologist,' so that, should it meet the eye of any ornithologist, or other of your readers, who may succeed in recapturing any of the marked birds, the history of such may be traced—in part at least—since the date of their release in each case. I have sent a similar note of the facts to the 'Field.'—J. A. HARVIE-BROWN (Dunipace, Larbert).

#### PISCES.

**Four-horned Cottus at Yarmouth.**—For the first time, after many years' seeking, I saw a locally-taken *Cottus quadricornis*, a shrimper bringing me no fewer than three examples on March 3rd. They were all of tolerable size, the largest measuring  $8\frac{1}{2}$  in. The ground colour was grey-brown, with lighter blotches on the upper surface, and an inclination to spottiness on the under parts, the lower part of the gill-covers being strikingly spotted with white. The eye, fresh as in life, was beautifully freckled with red. Considering the species is new to the county of Norfolk, three specimens coming in at one time is interesting. The head of one fish, which had been gutted for some reason by the shrimper, I forwarded to Mr. T. Southwell, who confirms my finding. One of the perfect specimens will go to the Norwich Museum, the other will be located in the Tolhouse Museum at Yarmouth. Along with *Cottus*, the shrimper also left me five examples of the Deep-nosed Pipe-fish (*Siphonostoma typhle*), a rather unusual number to be taken at one time.—ARTHUR H. PATTERSON (Ibis House, Great Yarmouth).

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**Fauna of North Wales.**—This important work, on which I have been engaged for the last seven years, is nearing completion, and will shortly be published. I shall be glad to receive notes from observers who have not yet contributed to the work, so that they may be incorporated before drafting for the press. The area dealt with includes the six counties—Anglesey, Carnarvon, Denbigh, Flint, Merioneth, and Montgomery—and the entire estuaries of the Dee and Dovey. The mammals, reptiles, amphibians, and fishes (marine and fresh-water) are included, as well as the birds.—H. E. FORREST (Hillside, Bayston Hill, Shrewsbury).



## EDITORIAL GLEANINGS.

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PROF. THEODORE GILL has given us a real addition to the literature of bionomical ichthyology in his memoir on "Parental Care among Fresh-water Fishes" (from the Smithsonian Report for 1905). The writer remarks that the species which manifest care for their young are so numerous that in this publication he restricts himself to those inhabiting fresh water. To the question—"How did the parental instinct manifested originate?" Professor Gill considers it must be regarded as a development of an aptitude inherent in the fish itself; and the attribute of parental care is regarded as an "outcome of selfishness, or, if you will, self-love, a result of the sense of proprietorship. The eggs are the fishes' own, and therefore they and the resulting larvæ are to be cared for as such." Much information is reproduced from the publications of various societies, and from other sources little consulted by other than specialists, and very many illustrations are interspersed in the text. The memoir is well worthy of separate binding, and thus securing a place for handy reference among our other ichthyological volumes.

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WE have received the first number of the 'Annals of Tropical Medicine and Parasitology,' edited by Prof. Ronald Ross, in collaboration with other well-known authorities. This part is largely entomological in matter, for, as well known, a knowledge of insects is now a most important factor in the study of many tropical diseases that attack mankind. "Insects and other Arthropoda collected in the Congo Free State" is the principal contribution, and is written by Mr. Robert Newstead, the late J. Everett Dutton, and Mr. John L. Todd. This paper must not only be consulted by the dipterous specialist—for new species are described—but the notes and observations relating to very many other species possess an importance far beyond what has hitherto been largely the entomological standpoint. From the technical description and enumeration of species (to which some of us must so largely devote our time), or the attractive speculation as to the meaning of so much apparent insect simulation (which claims the enthusiasm of other workers), it is a matter of the

greatest satisfaction and import to find entomology now a handmaid of medicine, and on the consulting list of anthropology.

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PROF. POULTON, at a meeting of the British Association at Cape Town in 1905, delivered a lecture on William John Burchell, the materials of which, with a portrait of Burchell, appear in the Association Report, of which a reprint has been sent to us. As Prof. Poulton is preparing a fuller biography of this African traveller, nothing in the nature of a review need at present be contemplated. Burchell was both naturalist and traveller, and though, in a philosophical estimate, he cannot be placed with either Humboldt, Darwin, or Bates, he was a very distinguished observer and collector, and a great pioneer traveller. After a long life of scientific activity, he committed suicide when he had passed the eightieth year of his life, probably through mere weariness, as the work he had elected to do was then completed. Possibly he may have brooded on the absence of scientific recognition, but then his was a studious rather than a pushful nature, and he did not perhaps comfort himself with the reflection of Lessing, that "some people obtain fame, and others deserve it." Many interesting footnotes are added to the reprint of this lecture.

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THE 'Bulletin of the Buffalo Society of Natural Sciences' (vol. viii. No. 4) is devoted to a review of the work done by the Society in co-operation with the Public Schools. We read that, "from the day of its inception, one fundamental principle has controlled the policy of the Buffalo Society of Natural Sciences. Realizing the important place which a great museum must eventually take in the educational system of its home town, we have always endeavoured to get into the closest and most effective relationship with the public schools of our city. Every facility which we had to offer to the student has been freely and continuously placed at his command. For years the science teachers of the city have been in the habit of bringing their classes to our building, and we have supplied them with room and materials for their work. In the study of geology, thousands of high school pupils have received great benefit from our collections of rocks and minerals, and our display of native birds and animals has been of the greatest help to the classes in zoology and natural history. At the beginning it was the custom for the teachers to accompany the classes, and take charge of their work while here, the museum offering simply its collections and rooms, no attempt being made to provide lectures or

instruction beyond what was displayed. In time, however, it was found that certain topics were of such universal interest that they would warrant special attention, and so the plan of special lectures for the schools came into being. A series of talks on 'Bees,' 'Birds,' and 'Insects' was arranged for Saturday afternoons, and were open to such of the grades as cared to come, and met with much success. The attendance at these talks was entirely optional with the classes, the Department of Education simply recommending that as many schools as possible take advantage of them."

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THE 'Irish Naturalist' has made a most welcome innovation in publishing the issues for January and February in one cover, and devoting both entirely to the Natural History of Lambay, Co. Dublin. The island of Lambay lies in the Irish Sea off the coast of Co. Dublin, in N. lat.  $53^{\circ} 29'$ , W. long.  $6^{\circ} 1'$ , and has an area of 617 acres above high-water mark. With Mr. R. Lloyd Praeger were associated a number of other workers, and we have a full account of the Geology, Zoology, and Botany, with historical notes of this small island. It is beautifully illustrated, and we hope that this example may be followed elsewhere. No island is too small nor too near our coasts for this purpose, and the aggregate results of a number of these reports would probably afford some hints and data at present rather outside the purview of many of our local societies.

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THE Director of the Zoological Gardens, Giza, Cairo, returned from the Sudan on the 25th December, 1906, and among the living animals he brought back were three young African Elephants (two males and one female) from the Blue Nile. One of the males has small tusks, the other is still quite a baby Elephant. These, together with the three female Elephants brought from the Blue Nile in 1905, now form a fine group of six African Elephants, a feature probably never seen before in any Zoological Gardens.

## OBITUARY.

DR. J. W. STROUD.

WE have only just learned, and to our sincere regret, that Dr. J. W. Stroud died at Pretoria in November, 1905, in his seventy-third year. Dr. Stroud, who was a native of Bristol, had settled down in South Africa many years ago, in what may be called the pre-scientific days of that colony; and, although his name was little known in natural history circles at the time of his death, he had yet acted as a pioneer in days when to be interested in zoological pursuits and not in the quest for wealth was looked upon as at least an oddity. His two principal publications are to be found in the 'Transactions of the Eastern Province (South Africa) Naturalists' Society,' which was established at Port Elizabeth, and are entitled, "The Honey-Bee (*Apis mellifica*), its Natural History and Management" (1884), and "The Nervous System and General Anatomy of the Articulata, including Millipedes, Spiders, and Insects" (1885).

It was, however, in the almost nightly gatherings at his house in Pretoria that he did most to foster philosophical discussion. Men of the most diverse views gathered round a hospitable and versatile host, and evolutionary discussions were common in at least one Transvaalian homestead. We still remember with affection our old partner at almost nightly whist, and the manner in which the best hands were shattered by his tendency to shunt on to a biological or theological argument. In an atmosphere of embryonic millionaires, he seemed to strive for "neither poverty nor riches"; and, if Dr. Stroud left no great zoological publication behind, we can remember that in any cause the good that a man does lives afterwards.

